

## DSM in the 21<sup>st</sup> Century:

### Work Together with Other States' Efficiency Programs to Benefit Arizona Ratepayers

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## Objectives

- Learn what other states are doing with their efficiency programs
- Increase understanding of how efficiency programs leverage one another to increase their effectiveness
- Identify opportunities for Arizona to benefit by leveraging other programs
- Understand how to use CEE



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## What is CEE? Consortium for Energy Efficiency

- Non-profit formed by utilities and stakeholders in 1991 to pursue national strategies linking local utility programs to obtain otherwise unachievable energy savings
- Successor effort to SERP which pooled utility incentives to make the first super-efficient refrigerator



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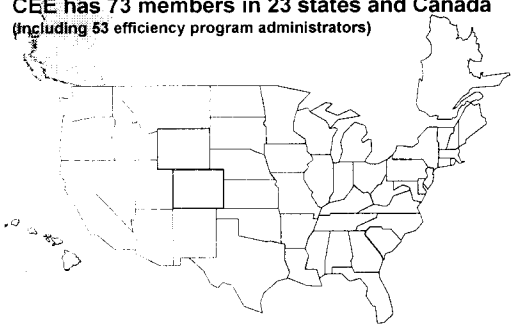
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**CEE has 73 members in 23 states and Canada**  
(including 53 efficiency program administrators)



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**What does CEE do?**

1. Develops and promotes voluntary national energy efficiency initiatives
2. Provides the national organization for all administrators of mandated efficiency programming
3. Provides a forum for issues common to multiple program administrators

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**Efficiency programs, not CEE, implement CEE initiatives.**

**Programs voluntarily adopt specifications, strategy and/or approach.**

**National market participants respond to consistency.**

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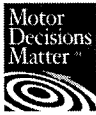
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## Benefits of Working Together



- National brands and partnerships for DSM
- Tap allies' marketing dollars
- Tap allies' credibility (customer relationships, brands)
- Influence supply and marketing of high efficiency goods from national players

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Let's now look at how this is  
being pursued by efficiency  
programs around the country ...

... and how it could be applied to  
Arizona's DSM programs

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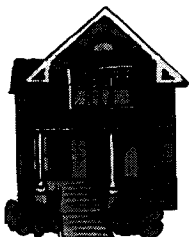
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## Residential Programs



- Appliances
- Lighting
- New Construction
- Heating and Cooling
- Whole House Improvement
- Multifamily
- Low-income
- Water heating

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## Appliance Program Strategies

- Promoting ENERGY STAR as marketing platform
- Cross promoting appliances
- Partnering with retailers and manufacturers
- Bundling with recycling programs



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## Recommendations

Use ENERGY STAR as your marketing platform

- tapping national and local partners
- leverage consistent messaging
- take advantage of national promotions

Maximize savings by promoting tiers above minimum ENERGY STAR

Do a baseline ENERGY STAR household survey - piggyback on CEE national survey

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## CEE Appliance Tiers – Room AC

Product Category (BTU)	Efficiency Level (EER)			
	Oct 2000 Federal Standard	Oct 2000 ENERGY STAR (+10%)	Oct 2002 CEE Tier 1 (+15%)	Oct 2002 CEE Tier 2 (+20%)
<8,000	9.7	10.7	11.2	11.6
8,000 - 13,999	9.8	10.8	11.3	11.8
14,000 - 19,999	9.7	10.7	11.2	11.6
>20,000	8.5	9.4	9.8	10.2

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## Lighting Program Strategies

- ENERGY STAR brand CFLs and fixtures
- Reducing or eliminating CFL rebates where product has gained market acceptance
- Focus on new construction
- Outreach to lighting showrooms
- Shift to ENERGY STAR Fixtures

*Movement from commodity-type to decorative  
Both in products and distribution channels*



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## Recommendations

- Promote ENERGY STAR CFLs and fixtures across programs  
new construction, low-income  
participate in national campaigns
- Work with lighting industry to promote new ENERGY STAR fixtures  
Support *Lighting for Tomorrow*, the national lighting fixture design competition  
This CEE-ALA-DOE partnership enables programs to partner with local showrooms



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## New Construction Programs

- Mostly ENERGY STAR Homes
- Some promotion of energy-efficient mortgages
- Cutting edge is leveraging ENERGY STAR Homes program to increase savings from high-efficiency appliances and lighting



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## ENERGY STAR Homes Recommendations

Leverage national program and support local participation

Obtain greater savings from the local implementation of national program

*"Complementary label approach"*

- Lighting - ENERGY STAR house packs
- Need ENERGY STAR appliance packs

*Examples*

- New England ENERGY STAR Homes - appliance and lighting incentives up to \$800/home
- Wisconsin Star Homes - Minimum ENERGY STAR lighting fixtures per home for "gold" builder status



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## Central AC Strategies

- Incentivize higher-efficiency equipment
- Focus on quality installation and promoting certified technicians
- Integrating with whole-house programming



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## Central AC Recommendations

- Promote High-Efficiency Equipment  
*CEE tiered specs with EER requirements*  
*Support new CEE national qualifying model database powered by ARI's Primenet using EER data*
- Pursue quality installation through certification and customer education  
*CEE specification and emerging national strategy*  
*NATE specialty test focused on energy efficiency*  
*BPI, Home Performance with ENERGY STAR*



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### CEE Residential HVAC Spec (S)

- Split systems
- Tier 1 is minimum **ENERGY STAR**
- Tiers 2 and Advanced recognize most efficient equipment available

	Cooling		Heating
Tier	SEER	EER	HSPF
1	13	11	8
2	14	12	8.5
Adv	15	12.5	8.5

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### CEE Residential HVAC Spec (P)

- Packaged systems
- Tier 1 is minimum **ENERGY STAR**
- Tiers 2 and Advanced recognize most efficient equipment available

	Cooling		Heating
Tier	SEER	EER	HSPF
1	12	10.5	7.6
2	13	11	8
Adv	14	12	8

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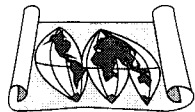
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### Commercial Program Strategies

#### Equipment/Sectors

- Unitary AC/HP
- Commercial Refrigeration
- Clothes Washers
- LED Traffic Signals
- Government Procurement
- Schools



#### New Construction

- High Performance Buildings

#### National Partnership

- **ENERGY STAR Partnership (for Energy Management)**

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## Unitary AC/HP

(a/k/a Rooftops)

### Advancing High-Efficiency Equipment

- Incentives for CEE Tier 2
- Now promoting higher specification with EER
- Good opportunity for demand reduction
- 30 organizations promoting spec
- EPA adopted Tier II as ENERGY STAR Spec (with some exceptions)

**RECOMMENDATION:** Promote CEE Tier 2



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## Energy-Efficient Schools

### BACKGROUND

- Significant spending in new construction and infrastructure improvements over next 5 years
- DOE estimates that 25% of energy costs are wasted
- Strong interest to support energy efficient schools - various approaches being pursued



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## Collaborative for High Performance Schools – California Model

- **Criteria**  
*Establish a pass or fail set of criteria (LEED-like)*
- **Planning Guide**  
*Sales kit - addresses the various stakeholders*  
*Describes the benefits of meeting the guidelines (non energy benefits)*
- **Design Guidelines (Tool)**  
*Resource material for A&E/contractors*  
*How to incorporate technologies and practices promoted in guidelines into plans*



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### Schools (K12) Recommendations

- Pursue a statewide model - adopt CA program model (CHPS), if applicable
- CEE Members participate in Schools Roundtable to share program info and lessons learned
- Review Directory of program resources (2001)
- Search and use CEE database of efficient schools case studies
- Also many other related programs – EPA, DOE, Alliance to Save Energy Green Schools



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### Retrocommissioning existing buildings

- Whole building approach within energy management framework
- Dynamic, not static – more than retrofitting
- Lots of pilots exploring program designs
- Widespread use of Building Operator Certification (BOC)
  - Training available for building operators  
*Available from NWECC (Council);  
used in NW, CA, MW and NE*



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### ENERGY STAR Partners Program

- EPA obtains top corporate commitment to energy management and continuing improvement  
*performance measurement  
targets or goals*
- CEE-EPA task force working to identify strategic points of connection and implement linkages
  - Directory of Energy Efficiency Programs on ENERGY STAR web page to get partners to local programs' web pages
- Goal – Increase participation and uptake of efficiency program offerings by ENERGY STAR partners signed up by EPA



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